RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/582, 413Source: 1FWPDate Processed by STIC: 06/22/2008

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RAW SEQUENCE LISTING DATE: 06/22/2006
PATENT APPLICATION: US/10/582,413 TIME: 12:52:10

Input Set : A:\14875-164US1.txt

3 <110 > APPLICANT: Ohtomo, Toshihiko

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Yabuta, Naohiro
              Tsunoda, Hiroyuki
      5
             Tsuchiya, Masayuki
      8 <120> TITLE OF INVENTION: Methods for enhancing antibody activity
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C--> 12 <141> CURRENT FILING DATE: 2006-06-09
     12 <150> PRIOR APPLICATION NUMBER: PCT/JP2004/018493
     13 <151> PRIOR FILING DATE: 2004-12-10
     15 <150> PRIOR APPLICATION NUMBER: JP 2003-415760
     16 <151> PRIOR FILING DATE: 2003-12-12
     18 <160> NUMBER OF SEQ ID NOS: 28
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Input Set : A:\14875-164US1.txt

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110				_						_		_		_	_	_		3	385
65 ttt gtg gac agt gta ggc ctg ccg gct ccc ccc agt atc atc aag gcc 66 Phe Val Asp Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala 71 130 130 140 135 140 136 136 137 140 136 136 137 140 136 137 140 137 140 137 140 137 140 137 140 137 140 137 140 137 150 155 150 160 145 155 155 155 155 155 155 155 160 155 165 170 170 170 170 170 170 170 170 170 170		_	Val	Lys	Asn	Val		Leu	Asn	Gln	Thr		Ile	Gln	Arg	Val			
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11																		4	481
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150																		į	529
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175																		į	577
81 aca gaa acc tgc tgc cct gct ctg cag agg cca cac tca gcc tct gct 625 82 Thr Glu Thr Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala 83 190 85 ctg gac cag tct cca tgt gct cag ccc aca atg ccc tgg caa gat gga 673 86 Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly 87 210 89 cca aag cag acc tcc cca act aga gaa gct tca gct ctg aca gcg gtg 90 Pro Lys Gln Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val 91 225 93 ggt gga agc tgc ctc atc tca gga ctc cag cct ggc aac tcc tac tgg 94 Gly Gly Ser Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp 95 240 97 ctg cag ctg cgc agc gaa cct gat ggg atc tcc ctc ggt ggc tcc tgg 817 81 Leu Gln Leu Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp 99 255 101 gga tcc tgg tcc ctc ctc tac tgg acc tgg gac ctg gg ggt cct tgg 102 Gly Ser Trp Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val 103 270 275 280 105 gca att gga ctg caa tgc ttt acc ttg gac ctg aag aat gtt acc tgt 106 Ala Ile Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys 107 108 caa tgg cag caa gag gac cat gct agt tcc caa ggt ttc ttc tac cac 110 Gln Trp Gln Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His 111 305 112 agc agg gca cgg tgc tgc cca aga gac aga cag tac ccc acc acc acc acc acc acc acc acc	78	Lys	Asp	Leu	Lys	Asn	Ser	Thr	Gly	Pro	Thr	Val	Ile	Gln	Leu	Ile	Ala		
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83 190	81	aca	gaa	acc	tgc	tgc	cct	gct	ctg	cag	agg	cca	cac	tca	gcc	tct	gct	•	625
85 ctg gac cag tct cca tgt gct cag ccc aca atg ccc tgg caa gat gga 673 86 Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly 210 220 225 226 226 226 226 226 226 226 226 226	82	Thr	Glu	Thr	Cys	Cys	Pro	Ala	Leu	Gln	Arg	Pro	His	Ser	Ala	Ser	Ala		
86 Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly 210 215 220 89 Cca aag cag acc tcc cca act aga gaa gct tca gct ctg aca gca gtg 721 89 Cca aag cag acc tcc cca act aga gaa gct tca gct ctg aca gca gtg 721 89 Pro Lys Gln Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val 215 230 235 93 ggt gga agc tgc ctc atc tca gga ctc cag cct ggc aac tcc tac tgg 769 94 Gly Gly Ser Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp 250 97 ctg cag ctg cgc agc gaa cct gat ggg atc tcc ctc ggt ggc tcc tgg 817 98 Leu Gln Leu Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp 250 99 255 260 265 101 gga tcc tgg tcc ctc ct gtg act gtg gac ctg ctg gag gat gca gtg 865 102 Gly Ser Trp Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val 285 103 270 275 280 285 105 gca att gga ctg caa tgc ttt acc ttg gac ctg aag aat gtt acc tgt 913 106 Ala Ile Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys 300 107 290 108 caa tgg cag cag gag gac cat gct agt tcc caa ggt ttc ttc tac cac 961 109 caa tgg cag cag ag gac cat gct agt tcc caa ggt ttc ttc tac cac 961 110 Gln Trp Gln Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His 311 305 310 315 111 3 agc agg gca cgg tcc cga ga gac aga ac agg tac ccc aga gac agg tac ccc at tgg gag gac 1009 114 Ser Arg Ala Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp 315 115 320 325 330 117 tgt gaa gag gaa gag aaa aca aat cca gga tta cag acc cca cag ttc 1057 118 Cys Glu Glu Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe 119 335 120 40 40 41 41 41 41 41 41 41 41 41 41 41 41 41	83	190					195					200					205		
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106 Ala Ile Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys 107																			
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110 Gln Trp Gln Gln Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His 111	107	7				290)				295	5				300	1		
111																			961
113 agc agg gca cgg tgc tgc ccc aga gac agg tac ccc atc tgg gag gac 1009 114 Ser Arg Ala Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp 115	110) Glr	ı Trp	Glr	ı Glr	ı Glu	ı Asp) His	: Ala			Glr	ı Gly	r Phe	Phe	Tyr	His		
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119 335 340 345 121 tct cgc tgc cac ttc aag tca cga aat gac agc gtt att cac atc ctt 1105 122 Ser Arg Cys His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu	117	7 tgt	gaa	gag	g gaa	gag	, aaa	aca	aat	сса	gga	ı tta	cag	acc	сса	cag	ttc	1	1057
121 tct cgc tgc cac ttc aag tca cga aat gac agc gtt att cac atc ctt 1105 122 Ser Arg Cys His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu	118	Cys	Glu	ı Glü	ı Glu	ı Glu	Lys	Thr	Asn	Pro	Gly	/ Leu	ı Glr	Thr	Pro	Gln	Phe		
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123 350 355 360 365	122	2 Ser	Arc	Cys	His	Phe	Lys	Ser	Arg	Asn	Asp	Ser	· Val	Ile	His	Ile	Leu		
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RAW SEQUENCE LISTING DATE: 06/22/2006
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Input Set : A:\14875-164US1.txt

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171				545					550					555			
			-	-	_	gtg	_		_			_				-	1729
	Asp	Thr	_	Glu	Glu	Val	Glu		Ser	Leu	Leu	Glu		Leu	Pro	Lys	
175			560					565					570				
						cct											1777
	Ser		Glu	Arg	Thr	Pro		Pro	Leu	Cys	Ser		Gln	Ser	Gln	Met	
179		575					580					585					
						cag											1825
	_	Tyr	Arg	Arg	Leu	Gln	Pro	Ser	Cys	Leu	_	Thr	Met	Pro	Leu		
183						595					600					605	
						gct											. 1873
	Val	Cys	Pro	Pro		Ala	Glu	Ser	Gly		Cys	Cys	Thr	Thr		Ile	
187			•		610					615					620		
189	gcc	aac	cat	tcc	tac	cta	cca	cta	agc	tat	tgg	cag	cag	cct	tga		1918

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190	Ala	Asn	His	Ser	Tyr	Leu	Pro	Leu	Ser	Tyr	Trp	Gln	Gln	Pro			
191				625					630					635			
193	gtc	gac															1924
			EQ II														
196	<21:	l> Ll	ENGT	<b>1:</b> 6:	35												
197	<212	2 > T	YPE:	PRT													
198	<213	3 > OI	RGAN	:SM	Maca	aca :	fasc:	icula	aris								
200	<400	0> S1	EQUE	VCE:	<b>.</b> 2								·				
201	Met	Pro	Ser	Trp	Ala	Leu	Phe	Met	Val	Thr	Ser	Cys	Leu	Leu	Leu	Ala	
202	1				5					10					15		
204	Pro	Gln	Asn	Leu	Ala	Gln	Val	Ser	Ser	Gln	Asp	Val	Ser	Leu	Leu	Ala	
205				20					25					30			
207	Ser	Asp	Ser	Glu	Pro	Leu	Lys	Cys	Phe	Ser	Arg	Thr	Phe	Glu	Asp	Leu	
208			35					40					45				
210	Thr	_	Phe	Trp	Asp	Glu	Glu	Glu	Ala	Ala	Pro	Ser	Gly	Thr	Tyr	Gln	
211		50		_			55					60					
		Leu	Tyr	Ala	Tyr	Pro	Gly	Glu	Lys	Pro	Arg	Ala	Cys	Pro	Leu	Ser	
214						70					75					80	
	Ser	Gln	Ser	Val		Arg	Phe	Gly	Thr	_	Tyr	Val	Cys	Gln		Pro	
217	_	_	_		85_					90					95		
	Ala	Gln	Glu		Val	Arg	Leu	Phe		Pro	Leu	His	Leu	-	Val	Lys	
220				100			_		105	_		_		110	_		
	Asn	Val		Leu	Asn	Gln	Thr		Ile	Gln	Arg	Val	Leu	Phe	Val	Asp	
223	_		115	_	_		_	120	_			_	125				
	Ser		GIA	Leu	Pro	Ala		Pro	Ser	IIe	Ile		Ala	Met	GIY	GLY	
226	<b>a</b>	130	_	~7	<b>~</b> 1	_	135		_	_	~3	140	_		_	~3	
		GIN	Pro	GIY	GIU		GIN	тте	ser	Trp		Ата	Pro	Ата	Pro		
	145	C	7	Dha	T	150	<b></b>	<b>a</b> 1	<b>T</b>	3	155	<b>~</b> 1	D	<b>T</b>	3	160	
	тте	Ser	Asp	Pne		Arg	Tyr	GIU	ьeu	_	Tyr	GIY	Pro	гуѕ	_	Leu	
232	Tara	7 an	Cor	Th~	165	Dro	Πp.~	7727	т1.	170	T 011	T10	71-	The	175	The	
235	цуь	ASII	Ser	180	Gry	PIO	1111	vai	185	GIII	ьеu	TTE	Ala	190	Gru	THE	
	Cve	Cve	Dro		T.011	Gln	Ara	Pro		Cor	בות	Car	Ala		Λαn	Gln	
238	Cys	Cys	195	на	пеп	GIII	Arg	200	птэ	SET	АТА	Ser	205	пеп	Asp	GIII	
	Ser	Pro		Δla	Gln	Pro	Thr		Pro	Trn	Gln	Aen	Gly	Dro	Lare	Gln	
241	DCI	210	Cys	nia	0111	110	215	Mec	FIO	пр	GIII	220	Gry	110	цуз	GIII	
	Thr		Pro	Thr	Δra	Glu		Ser	Δla	T.e.11	Thr		Val	Glv	Glv	Ser	
244		001			****9	230	niu	JCI	nια	цец	235	nια	var	Gry	OLY	240	
		Len	Tle	Ser	Glv		Gln	Pro	Glv	Asn		Tvr	Trp	T.e.i	Gln		
247	-1-				245		<b></b>		- L	250		- ] -			255		
	Ara	Ser	Glu	Pro		Glv	Ile	Ser	Leu		Glv	Ser	Trp	Glv		Trp	
250	5			260	р				265	0-7	017			270			
	Ser	Leu	Pro		Thr	Val	Asp	Leu		Glv	Asp	Ala	Val		Tle	Glv	
253			275		<b></b>		P	280		1	P		285			1	
	Leu	Gln		Phe	Thr	Leu	Asp		Lvs	Asn	Val	Thr	Cys	Gln	Trp	Gln	
256		290	- 4 -		<b></b>		295		-1-			300	-1-			<b>-</b>	
	Gln		Asp	His	Ala	Ser		Gln	Glv	Phe	Phe		His	Ser	Ara	Ala	
259						310			1		315	-1-				320	
		Cvs	Cvs	Pro	Ara		Ara	Tvr	Pro	Ile		Glu	Asp	Cvs	Glu		
	5	- 4 -	- 4		3		3	-1-			P			-1-			

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Input Set : A:\14875-164US1.txt

Output Set: N:\CRF4\06222006\J582413.raw

```
262
                    325
264 Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys
               340
                                    345
267 His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu Val Glu Val
                                360
270 Thr Thr Ala Leu Gly Ala Val His Ser Tyr Leu Gly Ser Pro Phe Trp
                            375
273 Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu
                        390
                                            395
276 Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
                                        410
279 Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
               420
                                    425
282 Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr
           435
                                440
285 Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg
                           455
288 Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro
                        470
                                            475
291 Ala Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr
294 Ala Leu Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu
                500
                                    505
297 Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu
298 515
                               520
300 Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg
                           535
303 Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys
                    550
                                            555
306 Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
                   565
                                        570
309 Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ser Gln Met Asp Tyr Arg
               580
                                    585
312 Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro
                                600
315 Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His
                            615
318 Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
319 625
                        630
321 <210> SEQ ID NO: 3
322 <211> LENGTH: 24
323 <212> TYPE: DNA
324 <213> ORGANISM: Artificial
326 <220> FEATURE:
327 <223> OTHER INFORMATION: an artificially synthesized sequence
329 <400> SEQUENCE: 3
330 caggggccag tggatagact gatg
332 <210> SEQ ID NO: 4
333 <211> LENGTH: 23
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24

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 06/22/2006
PATENT APPLICATION: US/10/582,413 TIME: 12:52:11

Input Set : A:\14875-164US1.txt

Output Set: N:\CRF4\06222006\J582413.raw

## Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,9,10,11,12,13,14,15,16,17,18

VERIFICATION SUMMARY

DATE: 06/22/2006

PATENT APPLICATION: US/10/582,413

TIME: 12:52:11

Input Set : A:\14875-164US1.txt

Output Set: N:\CRF4\06222006\J582413.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:32 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:30 L:353 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:5, Line#:351 L:433 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7, Line#:431